

APPENDIX C

AIR QUALITY SUPPORT DATA

**URBEMIS7G OUTPUT
(CONSTRUCTION AND OPERATIONAL EMISSIONS)**

URBEMIS 7G For Windows 5.1.0

File Name: C:\Program Files\URBEMIS 7G For Windows\Projects\PlumpJack.urb
Project Name: PlumpJack Squaw Valley Inn Expansion
Project Location: Mountain Counties and Rural Counties

DETAIL REPORT
(Pounds/Day - Winter)

AREA SOURCE EMISSION ESTIMATES (Winter Pounds per Day, Unmitigated)

| Source | ROG | NOx | CO | PM10 | SOX |
|-----------------------------------|------|------|------|------|------|
| Natural Gas | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Wood Stoves | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fireplaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Landscaping - No winter emissions | | | | | |
| Consumer Prdcts | 0.00 | - | - | - | - |
| TOTALS (lbs/day, unmitigated) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

UNMITIGATED OPERATIONAL EMISSIONS

| | ROG | NOx | CO | PM10 |
|---------------------------|------|------|-------|------|
| Resort Hotel | 7.96 | 8.33 | 62.66 | 2.14 |
| TOTAL EMISSIONS (lbs/day) | 7.96 | 8.33 | 62.66 | 2.14 |

Includes correction for passby trips.

Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2002 Temperature (F): 40 Season: Winter

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

| Unit Type | Trip Rate | Size | Total Trips |
|--------------|--------------------|-------|-------------|
| Resort Hotel | 6.72 trips / rooms | 62.00 | 416.64 |

Vehicle Assumptions:

Fleet Mix:

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|------------------------|--------------|-------------------|----------|--------|
| Light Duty Autos | 75.00 | 1.16 | 98.58 | 0.26 |
| Light Duty Trucks | 10.00 | 0.13 | 99.54 | 0.33 |
| Medium Duty Trucks | 3.00 | 1.44 | 98.56 | - |
| Lite-Heavy Duty Trucks | 1.00 | 19.56 | 40.00 | 40.44 |
| Med.-Heavy Duty Trucks | 1.00 | 19.56 | 40.00 | 40.44 |
| Heavy-Heavy Trucks | 5.00 | - | - | 100.00 |
| Urban Buses | 2.00 | - | - | 100.00 |
| Motorcycles | 3.00 | 100.00% all fuels | | |
| Travel Conditions | | | | |

| | Residential | | | Commercial | | |
|---------------------------|-------------|-----------|------------|------------|----------|----------|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 10.8 | 7.3 | 7.5 | 9.5 | 7.4 | 7.4 |
| Rural Trip Length (miles) | 16.8 | 7.1 | 7.9 | 14.7 | 6.6 | 6.6 |
| Trip Speeds (mph) | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |

% of Trips - Commercial (by land use)

| | | | |
|--------------|-----|-----|------|
| Resort Hotel | 5.0 | 2.5 | 92.5 |
|--------------|-----|-----|------|

Changes made to the default values for Construction

The worker option switch changed from on to off.
The asphalt option switch changed from off to on.
The stationary equipment option switch changed from on to off.
The architectural coating option switch changed from on to off.
The construction year changed from 2000 to 2002.
The length of construction period changed from 250 to 180.
The site grading max daily acreage estimate changed from to 0.8.
The site grading wheeled dozer total vehicles changed from to 2.
The site grading wheeled loader total vehicles changed from to 2.
The site grading miscellaneous total vehicles changed from to 2.
The worker construction year changed from 2000 to 2002.
The asphalt acres to be paved changed from 1 to 0.23.
The asphalt total days of paving changed from 10 to 5.
The stationary equipment equipment units changed from 2 to 0.
The mobile gas fork lift 50 HP total vehicles changed from to 2.
The mobile diesel tracked tractor total vehicles changed from to 1.
The mobile diesel miscellaneous total vehicles changed from to 2.
Mitigation measure Soil Erosion Measures: Water Exposed Surfaces 2x Per Day:0
has been changed from off to on.
Mitigation measure Properly Maintain Equipment: 5
has been changed from off to on.
Mitigation measure Asphalt Paving: Use Low VOC Asphalt: 5
has been changed from on to off.

Changes made to the default values for Area

The wood stove option switch changed from on to off.
The fireplcase option switch changed from on to off.
The landscape option switch changed from off to on.
The landscape year changed from 2000 to 2002.
Changes made to the default values for Operations

The operational emission year changed from 2000 to 2002.
The operational winter temperature changed from 75 to 40.
The operational winter selection item changed from 6 to 1.
The operational summer temperature changed from 75 to 70.
The operational summer selection item changed from 6 to 4.
The double counting option changed from 1 to 0.
The travel mode environment settings changed from both to: none

URBEMIS 7G For Windows 5.1.0

File Name: C:\Program Files\URBEMIS 7G For Windows\Projects\PlumpJack.urb
Project Name: PlumpJack Squaw Valley Inn Expansion
Project Location: Mountain Counties and Rural Counties

DETAIL REPORT
(Pounds/Day - Summer)

Total Land Use Area to be Developed (Estimated): 0 acres
Retail/Office/Institutional Square Footage: 0
Single Family Units: 0 Multi-family Units: 0

CONSTRUCTION EMISSION ESTIMATES

| Source | ROG | NOx | CO | PM10 | SOX |
|-------------------------------|-------|-------|------|-------|-------|
| Demolition | - | - | - | 0.00 | - |
| Site Grading | 6.08 | 57.60 | - | 15.60 | 10.80 |
| Const. Worker Trips | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Stationary Equip | 0.00 | 0.00 | - | 0.00 | 0.00 |
| Mobile Equip. - Gas | 0.80 | 0.29 | - | 0.05 | 0.00 |
| Mobile Equip. - Diesel | 3.36 | 37.28 | - | 3.14 | 3.41 |
| Architectural Coatings | 0.00 | - | - | - | - |
| Asphalt Offgassing | 0.12 | - | - | - | - |
| TOTALS (lbs/day, unmitigated) | 10.36 | 95.17 | 0.00 | 18.78 | 14.21 |

AREA SOURCE EMISSION ESTIMATES (Summer Pounds per Day, Unmitigated)

| Source | ROG | NOx | CO | PM10 | SOX |
|-----------------------------------|------|------|------|------|------|
| Natural Gas | 0.00 | 0.00 | 0.00 | 0.00 | - |
| Wood Stoves - No summer emissions | | | | | |
| Fireplaces - No summer emissions | | | | | |
| Landscaping | 0.10 | 0.01 | 0.69 | 0.00 | 0.00 |
| Consumer Prdcts | 0.00 | - | - | - | - |
| TOTALS (lbs/day, unmitigated) | 0.10 | 0.01 | 0.69 | 0.00 | 0.00 |

age: 6

UNMITIGATED OPERATIONAL EMISSIONS

| | ROG | NOx | CO | PM10 |
|---------------------------|------|------|-------|------|
| Resort Hotel | 5.40 | 7.43 | 39.78 | 2.14 |
| TOTAL EMISSIONS (lbs/day) | 5.40 | 7.43 | 39.78 | 2.14 |

includes correction for passby trips.
does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2002 Temperature (F): 70 Season: Summer

EMFAC Version: EMFAC7G (10/96)

Summary of Land Uses:

| Unit Type | Trip Rate | Size | Total Trips |
|--------------|--------------------|-------|-------------|
| Resort Hotel | 6.72 trips / rooms | 62.00 | 416.64 |

Vehicle Assumptions:

Fleet Mix:

| Vehicle Type | Percent Type | Non-Catalyst | Catalyst | Diesel |
|-------------------------|--------------|-------------------|----------|--------|
| Light Duty Autos | 75.00 | 1.16 | 98.58 | 0.26 |
| Light Duty Trucks | 10.00 | 0.13 | 99.54 | 0.33 |
| Medium Duty Trucks | 3.00 | 1.44 | 98.56 | - |
| Light-Heavy Duty Trucks | 1.00 | 19.56 | 40.00 | 40.44 |
| Med.-Heavy Duty Trucks | 1.00 | 19.56 | 40.00 | 40.44 |
| Heavy-Heavy Trucks | 5.00 | - | - | 100.00 |
| Urban Buses | 2.00 | - | - | 100.00 |
| Motorcycles | 3.00 | 100.00% all fuels | | |

Travel Conditions

| | Residential | | | Commercial | | |
|---------------------------|-------------|-----------|------------|------------|----------|----------|
| | Home-Work | Home-Shop | Home-Other | Commute | Non-Work | Customer |
| Urban Trip Length (miles) | 10.8 | 7.3 | 7.5 | 9.5 | 7.4 | 7.4 |
| Rural Trip Length (miles) | 16.8 | 7.1 | 7.9 | 14.7 | 6.6 | 6.6 |
| Trip Speeds (mph) | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 | 35.0 |
| % of Trips - Residential | 32.9 | 18.0 | 49.1 | | | |

% of Trips - Commercial (by land use)

| | | | |
|--------------|-----|-----|------|
| Resort Hotel | 5.0 | 2.5 | 92.5 |
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The operational emission year changed from 2000 to 2002.
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The operational winter selection item changed from 6 to 1.
The operational summer temperature changed from 75 to 70.
The operational summer selection item changed from 6 to 4.
The double counting option changed from 1 to 0.
The travel mode environment settings changed from both to: none

**URBEMIS7G OUTPUT
(CONSTRUCTION WORKERS)**

URBEMIS 7G For Windows 5.1.0

File Name: C:\Program Files\URBEMIS 7G For Windows\Projects\PlumpJack_Worke
Project Name: PlumpJack Squaw Valley Inn Expansion - Construction Workers
Project Location: Mountain Counties and Rural Counties

DETAIL REPORT
(Pounds/Day - Summer)

Total Land Use Area to be Developed (Estimated): 3 acres

Retail/Office/Institutional Square Footage: 0

Single Family Units: 0 Multi-family Units: 62

CONSTRUCTION EMISSION ESTIMATES

| Source | ROG | NOx | CO | PM10 | SOX |
|-------------------------------|------|------|------|------|------|
| Demolition | - | - | - | 0.00 | - |
| Site Grading | 0.00 | 0.00 | - | 0.00 | 0.00 |
| Const. Worker Trips | 0.18 | 0.26 | 0.49 | 0.05 | - |
| Stationary Equip | 0.00 | 0.00 | - | 0.00 | 0.00 |
| Mobile Equip. - Gas | 0.00 | 0.00 | - | 0.00 | 0.00 |
| Mobile Equip. - Diesel | 0.00 | 0.00 | - | 0.00 | 0.00 |
| Architectural Coatings | 0.00 | - | - | - | - |
| Asphalt Offgassing | 0.00 | - | - | - | - |
| TOTALS (lbs/day, unmitigated) | 0.18 | 0.26 | 0.49 | 0.05 | 0.00 |

Changes made to the default values for Construction

The site grading option switch changed from on to off.
The stationary equipment option switch changed from on to off.
The mobile equipment option switch changed from on to off.
The architectural coating option switch changed from on to off.
The construction mitigation measure option switch changed from on to off.
The worker construction year changed from 2000 to 2002.

ARCHITECTURAL COATING EMISSIONS

PlumpJack Squaw Valley Inn Expansion
Architectural Coatings

| | |
|---|-----------------|
| Total Building Area | 152,179 sq ft |
| Convert Bldg Area to Surface Area ¹ | 2.7 sq ft/sq ft |
| Total Surface Area | 410,883 sq ft |
| Coverage ² | 350 sq ft/gal |
| VOC Emission Factor (Water-Based Coatings) ³ | 0.44 lb/gal |
| Total VOC Emissions | 516.54 lb |
| Days to Paint ⁴ | 10 days |
| Daily VOC Emissions | 51.7 lb/day |

Data Source:

1. URBEMIS7G conversion factor
2. Assumed coverage (typically 350-400 sq ft/gal)
3. CARB Area Source Method 6.3
4. K.B. Foster Civil Engineering

AREA SOURCE (FUEL COMBUSTION) EMISSIONS

**PlumpJack Squaw Valley Inn Expansion
Area Source (Fuel Combustion) Emissions**

Fuel Usage

| | | |
|-----------------|-----------|---------|
| Number of Units | | 62 |
| Monthly Usage | cu ft/mo | 248,713 |
| Daily Usage | cu ft/day | 8,290 |

Note: Fuel usage assumed to be 4011.5 cu ft/unit/mo (URBEMIS7G - multifamily)

Emissions

| | ROG | NOx | CO | PM10 |
|--|------|------|------|-------|
| Emission Factor (lb/10 ⁶ cu ft) | 7.26 | 100 | 40 | 0.18 |
| Daily Emissions (lb/day) | 0.06 | 0.83 | 0.33 | 0.001 |

Note: Emission factors from URBEMIS7G (natural gas combustion)